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The Effects of the Implementation of Peer-Mediated Strategies on Student Social-Emotional Growth in Fully Inclusive Preschools

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The Effects of the Implementation of Peer-Mediated Strategies on Student Social-Emotional
Growth in Fully Inclusive Preschools

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Abstract

This action research project was conducted to explore the effects of peer-mediation on social-emotional development and self-regulation in students aged three to five. Throughout the process, the teacher received professional coaching from a LEAP coach from the University of Denver as well as coaching from AEA staff members with background in autism and early intervention. Peer mediated strategies were introduced initially in October of 2018; during the research, the teacher focused solely on one strategy. Prior to the research, two strategies had been implemented and coached to fidelity. Quantitative data was collected from tracking and monitoring logs and researcher behavior in the form of Teaching Strategies Gold. The data was entered in a table and was used to determine if social-emotional skills (referencing self-regulation, entering social settings and positive interactions with peers in the form of getting attention, sharing or requesting) increased as a result of the peer-mediated strategies. After analyzing the data and teacher interviews, it was determined that the implementation of peer-mediated strategies had a positive effect on social-emotional growth.

The Effects of the Implementation of Peer-Mediated Strategies on Student Social-Emotional Growth in Fully Inclusive Preschool

Many classrooms that use peer-mediated strategies base it loosely off the original model, Learning Experiences (LEAP), created by Dr. Phil Strain in 1981 (LEAP Preschool Model, 2018). LEAP is an alternative program for preschoolers and parents, was created to serve as a model for preschool students ages three to five in fully-inclusive classrooms who displayed characteristics or a diagnosis of Autism Spectrum Disorder. Although LEAP is merely one example of how educators have infused peer-mediation into their classrooms, the popularity of peer-mediation itself has grown pointedly. Its focus has shifted from the development of social skills solely as a model for students on the spectrum to students across the classroom, regardless of contributing factors. The purposes of peer-mediated strategies aim to provide students with cross-curricular opportunities to practice key instructional skills throughout the duration of their day, with multiple occasions for both guided and independent practice. With the increase in academic pressures finding its way to preschool students, less curriculum and content focuses on the development of the whole child and social-emotional skills. However, without a solid foundation in self-regulation, executive functioning and social skills, academics are often difficult as instruction takes a back seat to behavior management.

Children are taught social skills directly using concrete and manipulative objects, accompanied by a gradual release model. Initially, teachers model the ideal social skill. Next, teachers and typically developing peers' model for other students, with an end goal of having students model the skills independently. Both typically-developing and target students are given opportunities to practice after the skill has been taught directly and explicitly. After the skills have been taught large-group, students are encouraged to use the skills across their day; many

teachers use a simple extrinsic reward for independent use of the skill. Students who are identified as target students are those who need more guidance, typically students with adaptive behavior goals in the area of social interactions. Target students are taught the skills to be able to have a foundational understanding of how to interact with peers, while peer models are taught the social skills to communicate with students who may otherwise have difficulty making connections with others. The relationship between peers and target students is reciprocal and mutually beneficial.

There is a positive correlation between the implementation of peer-mediated strategies and social-emotional growth. Preschool students are in crucial and formative years of development, relying on experiences and immediate environment to form a sense of understanding of their world. For many, preschool serves as their first experience with peers; this, in combination with the egocentric nature of young children, serves as a veritable melting pot for social emotional concerns. The intended outcomes of this action research are to analyze the effects on students from a variety of perspectives related to age, gender, socioeconomic status, academic status and gender. It is important to know that much of the research that has been done was completed within the first fifteen years of LEAP's inception (1981-1996), but little has been done within the past ten years, making the need for current research vital. The purpose of this study is to study the effects, positive or negative, using social-emotional data collected from Teaching Strategies Gold (Educational Curriculum and Assessment for Children, 2019). Gold is collected and assessed three times per year in classrooms that follow traditional school calendar and four times in year-round childcare settings. All data taken is based solely on observation and is used by teachers to drive instructional choices. Teachers who use the system for data collection, which is mandated by the state of Iowa for all accredited preschool

classrooms, must pass an interrater reliability assessment to determine if the user is able to take data subjectively. Gold is shared with parents regularly and is often used by preschool teachers to determine kindergarten readiness.

Review of the Literature

Definition of Peer-Mediation

Peer-mediation is not easily defined; it's a complex concept that teachers utilize in a differentiated fashion according to the needs of their students. Neitzel (2008) defines peer mediation as frontloading students with strategies that will allow them to become increasingly independent in social situations, which comprise approximately 75 percent of their day. Peer-mediation boils down to well planned, systematic classroom structures that allow for high-quality social interactions. Harper and Maheady (2007) found that students with learning disabilities needed the highest quality instruction available, but do not need instruction that is qualitatively different from that proven to be effective for other students without academic or behavioral difficulties. High quality indicates that strategies being taught are effective, regardless of who is teaching them, the intended audience, or the location of the instruction.

Peer-mediation is not exclusively for students with special needs. Research indicates that all students can benefit from direct instruction in social skills and social emotional development (Kauerz & McMaken, 2004). Social skills are an early precursor to academic success and often act as indicators for developmental milestones. Many stakeholders in education are failing to recognize the significance of social-emotional development as academics become more prevalent, now shifting the focus of early childhood education onto more rigorous math and literacy skills. Early childhood professionals are feeling academic pushdown, resulting in a lack of time and resources to teach other key areas of development, specifically social-emotional

development. Research indicates that positive social emotional skills strengthen the potential for positive peer interaction and influence (Hawley, Little, & Pasupathi, 2002).

The Creation of Peer Mediated Models. The first peer-mediation model was the creation of LEAP. Learning Experiences: an Alternative Program for Preschoolers and Parents was created in 1981 to serve as a model for preschool students age's three to five in fully inclusive preschool classrooms, targeting students who displayed characteristics or a diagnosis of Autism Spectrum Disorder (LEAP, 2019). At the time of its inception, LEAP was one of the first models in education that focused on the ability to commit to special education students and their families as a means of inclusivity in the classroom. Prior to this, many special education students were not viewed as valued members of their classrooms or were often segregated from their peers in separate classrooms. With the increase in fully inclusive classrooms becoming widespread, educational stakeholders saw a need for strategies that were mutually beneficial for both special education and typically developing students to promote appropriate social interactions. While peer-mediated strategies have evolved since the inception of this model, it is still widely used and accepted as a model for the implementation of these strategies with fidelity.

LEAP is not the only model of peer-mediation that exists. Effective inclusive programming options exist in a mutually-beneficial context. Inclusive programming and peer mediated strategies accompany one another in their creation and implementation. Since the introduction of inclusivity as a concept, teachers and stakeholders alike have seen mutually beneficial relationships between typically developing peers and peers demonstrating deficits. Peer teaching models, especially those who use all peers in the classroom regardless of needs and stature, are incredibly full of value for all members of the class. Peer-mediated strategies, when

taught to all students, create equal opportunity, shared goals, mutual assistance, group cohesion and interdependency (Harper & Maheady, 2007).

Components of Peer Mediated Models. Peer mediated models feature several components. In the LEAP model, students are taught social skills directly in a large group instructional manner. Social skills include, in specific order, getting a peer's attention, sharing an item, requesting an item, giving a play idea and giving a compliment. The LEAP model requires that teachers remain on the same social skill until 80 percent of the class has mastered the skill before moving on. Research indicates that regardless of disability status, active participation in learning and high rates of student response have little effect without the result of accurate responses. Students need repeated practice multiple times per day across a variety of settings to be able to retain and apply their knowledge (Péladeau, Forget & Gagné, 2003). Additionally, students need to be able to perform a task with 80-90% accuracy to benefit instructionally (Brophy & Good, 1986). Other peer-mediated models identify different skills as essential to the functioning of inclusion. Kohler and Strain (1990) identified the following four types of peer-mediated procedures: peers facilitate the social or nonacademic behaviors of other children, peers teach developmental skills, peers model selected and appropriate behaviors, and peers actively participate in group reinforcement contingencies (Hollingsworth, 2005).

In any inclusive setting, especially when using peer-mediated strategies, it is crucial for a diverse classroom. Typically developing peers facilitate interactions and guide social skills for those who show delays in social-emotional areas of growth. Exposure to a variety of different abilities, both cognitively and physically, provides a mutually beneficial relationship for all students within the classroom. Typically developing peers are identified and labeled as students who reach developmental milestones in an average range of time and do not display strong

deficits academically or socially. Classrooms with only high-functioning or typically functioning peers run the risk of ill-exposure and unprecedented judgements against students with special needs, proving that inclusion provides common benefits for all students (Skinner, Buysse, & Bailey, 2004). Additionally, classrooms that are self-contained lack peer modeling, exposure to typically developing milestones and academics, and often lack the high expectations and standards that accompany many general education classrooms. The relationship between typically developing peers and those who have delays are mutually beneficial. However, it requires purposeful planning on behalf of the teachers. Skinner et al. (2004) indicated that children with disabilities with higher developmental abilities who were paired with developmentally advanced play partners engaged in more social play, while children with disabilities with lower developmental abilities did not engage in as much social play when paired with a developmentally advanced partner.

Implementation and fidelity. For peer-mediated strategies to be effective, they must be implemented with fidelity. It often comes into speculation the amount of difficulty surrounding the ability to provide resources to teachers and support personnel that have minimal experience with students in an inclusive setting. Often, students come to preschool classrooms from early access with little to no experience in a setting with such an incredibly diverse and large number of peers. With so many varying diagnoses and delays, it is often difficult for those immediately involved to feel like they have adequately been taught the skills necessary to be able to provide these students with a quality education. It is not uncommon for families and professionals working in early childhood settings to feel a lack of training, especially with support staff and paraprofessionals (Peck, Furman & Helmstetter, 1993). This makes it exceedingly difficult to implement research-based strategies with fidelity.

Early childhood educators should focus their sights on four different components when ensuring they are implementing peer mediated strategies with fidelity. Initially, teachers should examine if they are creating multiple opportunities for students to practice their strategies across the duration of their day. For the outcome to be truly successful, skills should be taught across multiple activities and contexts being reinforced by multiple people throughout the day (Kohler, & Strain, 1999). After ensuring that enough practice occurs throughout the course of the day, it is crucial for teachers that the direct instruction, embedded practice and immediate feedback of social skills is taught in a manner that is intensive. Students with special needs need repeated opportunities to practice their newly acquired skills (Greenwood, Hart, Walker & Risley, 1993). When thinking specifically of peer-mediated interventions, implementations should occur over extended periods of time with a high level of frequency in order to optimize outcomes. Educators should also ensure that peer-mediated strategies are taught in a manner that is effective and practical. Because students in preschool are incredibly literal and egocentric, application needs to be real-world to be deemed highly operative. Applications should occur in commonly-used situations; at center time, meal or snack times, and during large group instruction.

Advantages of Peer Mediation

Many advantages of peer mediation are evident. Peer mediations have positive effects on both typically developing peers and peers with special needs, proving to be successful in improving how and for how long children interact with peers (Odom et al., 1999). Students who are identified as typically developing gain skills to interact appropriately with students who display skill deficits. It can often be incredibly difficult for peers to maintain or engage in reciprocal play schemes with target students without having a solid foundation of appropriate social skills. Typically developing peers often express frustrations with target students; using peer-mediated interventions becomes a second-nature, enabling peers to reevaluate their approaches, display delayed gratification, redirect target students and ultimately engage in mutually beneficial interactions.

Disadvantages of peer mediation. Peer-mediated strategies can also have an adverse effect on students who feel singled out. This can prove to be a huge disservice for students. Often, target students may associate themselves as being different from their peers or see themselves in constant redirection from teachers. With social emotional development being so crucial during the formative years, it is essential that students feel like valuable members of their classroom society, regardless of abilities or other defining factors. Therefore, children with and without disabilities should receive social skills coaching so that children with disabilities are not singled out, with interventions being conducted within the context of activities or play themes that captivate children's attention (Hollingsworth, 2005).

Adults are often skeptical that students, especially those as young as preschool, can successfully and effectively provide interventions to their peers. Students who are considered

typical are able to provide guidance to peers with delays effectively. Goldstein and Wickstrom, (1986); Strain, Danko, and Kohler (1995) found that typically developing peers as young as 36 months can learn to use facilitative social and communicative strategies with children who have special needs. When implemented with fidelity, those who are typically developing often do not realize they are facilitating skills for their peers and are likely to need practice with the skill themselves. However, for this to be effective, teachers need to pre-teach and consistently practice these strategies with students, both target and typical.

Educator Paradigm Shifts

Because teachers, parents and other educational stakeholders are often ill-prepared for a fully inclusive classroom, paradigm shifts often occur during the process of peer-mediated strategies. Additionally, teachers are often uncomfortable with not being in control of situations within their classroom. Teachers by nature often intervene quickly in affairs among students in order to maintain a sense of order within their classrooms. Allowing for peer mediation requires teachers to know when to step back and allow students to problem solve without guidance. Bricker (1995) indicates that significant challenges exist not only in LEAP classrooms but in almost all early childhood settings when it comes to facilitation and development of strategies to use in fully integrated settings with both typical and special education students.

However, the implementation of peer-mediation does not indicate that teachers are not active participants as students begin to explore and participate in their newfound independence. Hughett, Kohler, and Raschke (2013) conducted research using buddy-play to provide additional opportunities for students to practice peer-mediated strategies. Results of their student indicated that using these interventions during cooperative play increased positive social interactions among peers but may require a hierarchy of scaffolding from teachers. When skills are new,

teachers may need to provide visual cues, verbal cues or modeling for students to actively use the newly-acquired peer-mediated strategy. As time increases, teachers find themselves needing to provide prompting less frequently.

Instructional Strategies for Implementation of Peer Mediation

Peer-mediated social skills need to be explicitly taught to all students in the classroom, regardless of if students are identified as a target student or typically developing peer. All students are contributing, valuable members of their classroom culture but are often not treated as such. Teachers unintentionally create gaps between students with deficits and their typically developing peers by using the wrong strategies, singling out or segregating some students from the classroom population. While the interventions are targeted to aid students with skill deficits to close the achievement gap between themselves and other peers, the skills themselves are mutually beneficial for their counterparts as well. Social skills used in the form of peer-mediation have been found to improve peer acceptance, social interactions and skills in various context, which are conjectured to be significant for the development of friendships (Ashley, Parker & Walker, 1996).

Skills are typically taught in a gradual release model whole-group. Teachers model skills appropriately with other adults in the room, reviewing each step of the social skill with visual components and interactive manipulatives, such as a highly popular toy in the room. Once students have a solid understanding of the skill, the teacher may demonstrate the skill incorrectly, prompting students to recite the correct steps in the skill to teachers. As time and understanding progress, teachers use students to model the social skill for their peers. Materials that are of high interest or are novel to students are used in the modeling process to visually model proper use simultaneously. Additionally, teachers plan purposeful encounters for students that are

specifically designed to target the peer-mediated strategies. Odom et al. (1999) found that specifically and purposefully arranging playgroups involving children with and without disabilities was effective for promoting peer acceptance. Teachers should seek out opportunities to specifically arrange their students so that students in each group display a balance of developmentally advanced and students who need practice and instruction in social skills.

Motivation. Because students in preschool classrooms are egocentric by nature, motivation is necessary to increase engagement in peer-mediation. Motivation can be defined as the process by which children's goal-directed activity is instigated and sustained (Pintrich & Schunk, 1996). The LEAP model itself features a temporary extrinsic reward for students demonstrating the strategies during centers. Teachers have the option of encouraging students in other manners appropriately following their school's PBIS regulations. As teachers work with students on the incorporation of their peer-mediated strategies over the course of their day, both intrinsic and extrinsic motivation become increasingly necessary to encourage participation and on-going demonstration of the skills, both independently and with adult facilitation.

Intrinsic motivation. By purposefully teaching specific interventions for peer mediation, all students in classrooms are provided with the foundations necessary to effectively engage and reinforce interactions with classmates who show developmental delays (DiSalvo & Oswald, 2002). However, simply being provided with these skills does not constitute a child applying and using these skills to benefit themselves or peers. This is where intrinsic motivation plays an enormous role. Carlton and Winsler (1998) determined that the older a child gets, the differentiated their motivational patterns become. As teachers model the new strategies, they should be prepared to provide appropriate praise and discussion surrounding how students feel when they are demonstrating appropriate interactions, validating the actions and emotions of

students involved. Students need to understand how their actions have an effect on their environment and those who surround them, creating a form of intrinsic motivation on an individual basis (Carlton & Winsler, 1998).

Extrinsic Motivation. Extrinsic motivation, although a slightly controversial means of increasing expected behaviors, is a highly common practice in many classrooms. Schools across the United States often follow the PBIS model, which creates Positive Behavior Intervention and Supports, using a set of clear, easy to follow expectations. PBIS places an emphasis on a schoolwide system of support that proactively teaches expectations across both academic and non-academic settings and is often accompanied by a ticket or token that can be exchanged for a physical tangible or other reward (PBIS, 2019). LEAP uses a simple but effective SuperStar system. When peers are seen demonstrating the peer-mediated strategy, they both receive a star to pin to their shirts with an explanation that reinforces the strategy (LEAP, 2019).

Cross Curricular Implementation

For peer-mediated strategies to be effective, teachers should ensure multiple practice opportunities to occur. DiSalvo and Oswald (2002) found that a supportive environment that includes integration throughout the day, well-designed play areas and spaces and specific and purposeful materials increases the likelihood for appropriate interactions between all peers, especially between typically developing peers and their special education counterparts. Teachers need to be planned and systematic in their approaches to the infusing of strategies throughout the duration of a student's day. Teachers should be actively seeking opportunities for social interactions as a replacement for continual, teacher-directed learning. Something as simple as passing or collection of materials, greeting students as they enter the classroom or buddy play can create social opportunities to allow students multiple occasions to demonstrate and practice

peer-mediated skills. Additionally, using social and play scripts is one strategy used by educators to help students practice peer-mediation during centers and arrival. Not only can these scripts be adjusted to meet the needs of individual students (Hollingsworth, 2005), but they are functional for a variety of purposes, including how to enter a social setting or how to share materials.

Whole group. Whole group instruction is the primary time for teachers to teach or reinforce peer-mediated strategies. While students do not typically directly practice the skill at this time, it is modeled for them by both teachers, classroom support staff and peers. Direct instruction is crucial for students to be provided with a solid understanding of how the skill functions and its purpose. It is critical for teachers to instruct students in the *why* behind the strategy; why do I want to share my toy? Why do I want to ask someone to play with me? Why do I want to get my peer's attention? Students are more likely to demonstrate the skill independently when they are provided with an understanding of the reasoning for their performance of the skill.

Additional practice. Buddy play can be used as a form of additional practice. Buddy play, defined as purposeful pairing of students to provide a positive peer model to a student displaying social deficits, has been proven to be an effective manner for which peer-mediated strategies can be practiced and utilized. Hughett et al. (2013) found that buddy play is a feasible means for teachers to use in the classroom that intensifies and improves positive social interactions in the classroom. Buddy play increases the frequency of social commentary between students, even students with language delays; typically developing peers learn to use eye contact, joint attention and play, initiating share offers and requests and positive responses to encourage reciprocal responses within peers demonstrating deficits. Additionally, it provides opportunities

for students to practice the current social skill or strategy with direct supervision and feedback from adults within proximity.

Effects on Social Emotional Development

Types of data taken. Teachers who work with students closely daily may not necessarily notice instantaneous results when implementing peer mediated strategies. Like any intervention, peer-mediated strategies need to be implemented with fidelity and its effects must be studied over time. In the moment, teachers are reflective and able to adjust approaches in the moment to tailor to the needs of their students. To examine the effects of whether peer-mediated strategies are having positive effects on students over an extended period, many teachers examine data taken through Teaching Strategies Gold. Because a large section of Gold focuses on social-emotional development, teachers are able to compare students with age level expectations and examine growth over time.

Gold was developed in the height of the war on poverty in the 1960s. Founded by Diane Trister Dodge, the program was originally developed as a means to common understandings for best practices in early childhood education, specifically in Head Start programs. The first pieces of the program focused on room arrangement, followed by the development of the Creative Curriculum, examining typical milestones for kids aged birth through five. Using these milestones, teachers are able to determine if students are developing typically or experiencing delays. Gold's Creative Curriculum covers areas including social-emotional, physical, math, literacy, cognitive and language, taking into consideration students with IEPs and students who are English Language Learners. Gold is an observation-based assessment system that uses color-coded, age-specific rating scales. Teachers take notes (videos or anecdotal) surrounding

children's demonstration of skills in 38 objectives across ten areas of development and learning (Koeun, 2016).

Because Gold is an observation-based assessment system, it is seemingly objective. Despite educators needing to take an interrater reliability test to ensure that observations are entered and scored in a subjective manner, it is often called into question the reliability of such a system. Koeun (2016) noted that not all children's self-initiated play activities are considered equally important to teachers. In fact, many teachers prioritized certain objectives over others if they yielded more useful information and did not rely on naturally occurring or spontaneous opportunities. Additionally, because the Gold system is entirely observation-based, appraisals and evaluations are often misaligned with those outside of the classroom context, such as parents or other educational staff (Cabell, Justice, Zucker, & Kilday, 2009). Traditional assessments include standardized protocols for proctoring and definitive measures for what constitutes understanding and demonstration of a skill. The fact that the assessment system is completely observational calls for some concern regarding liability.

Teachers who use peer-mediated strategies in the classroom tend to have fully-inclusive classrooms with a representation of both special education and general education students. Peer mediated strategies help develop skill deficits in students with adaptive behavior needs that require growth in social situations; entering play settings, engaging in reciprocal play and multi-step play sequences. Peer-mediated instruction is ideal for both inclusive and self-contained classrooms and is compatible with the goals of both special and general educators (Greenwood, Maheady, & Carta, 2002; Harper, Maheady, Mallette, & Sacca, 1992; Maheady, Harper, & Mallette, 2000). Furthermore, its effectiveness in helping students achieve both academic and social outcomes has been demonstrated repeatedly IEP data can be used by teachers to determine

if the peer-mediation is effective over a period of time; if data points follow the trend-line and scores are increasing as teachers enter data on a bi-weekly basis, strategies are proving to be effective in their implementation.

Methods

Participants

This action research study was conducted in a fully inclusive early childhood classroom that utilizes a co-teaching model. A total of 36 students are enrolled in the program, with 18 students attending the morning session and 18 attending the afternoon session. five students are identified as special education and have written, functional individualized education programs (IEPs). Other students may have an IEP for speech and language goals exclusively or may be identified “at-risk” without a formal IEP. In the morning session, nine students are female, and nine students are male. Seven students entered the school year at the age of three. Alternatively, in the afternoon session, eight students are female, and 10 students are male, with five of those students entering as a three-year-old. Students attend preschool Monday through Thursday, for three hours. Classrooms also have student who identify as English language learners (ELLs), with English not being the native or the primary language spoken in the home. Possible participants were evaluated based upon their Fall 2018 scores for the Teaching Strategies Gold assessment system. If students were at or below age-appropriate expectations in the areas of social-emotional development, including self-regulation, entering social settings, appropriately engaging with peers or following classroom expectations, they were considered to be eligible as a participant. A total of seven students between both morning and afternoon sessions met these criteria, with three of the seven students identified as special education with a current IEP. These seven students will serve as participants in this action research.

Data Collection

The focus of this action research was to determine if interventions had effects on student social-emotional development when taught directly and infused throughout the duration of a day, with multiple, cross-curricular opportunities to practice. Quantitative data was collected with a data collection sheet (Appendix A), utilized by the researcher, to indicate when target students were given a Super Star, the extrinsic reward given when the social skills interventions are used. Data was taken to determine the number of opportunities that students utilized the social skill independently versus with assistance or prompts. Both teachers and classroom associates collected this frequency data, which included the date, time, social setting, peers involved and whether students displayed the skill independently or with prompting. Qualitative data was collected through observation-based data, which was then entered digitally into Teaching Strategies Gold (see Appendix B), as well as informal interviews with parents during parent-teacher conferences (See Appendix C). During data collection, baseline data was collected, interventions were implemented, and anecdotal, observation-based data was measured. The dependent variable was the growth in independent use of interventions, whereas the independent variable was the interventions themselves.

Using the targeted peer-mediated social skills the researcher will examine student improvement on the Teaching Strategies Gold assessment system, in the areas of manages feelings, follows limits and expectations, interacts with peers, balances needs of rights and others and solving social problems. Expectations and milestones for three and four-year-old students are labeled in color-coded bands within Gold, allowing the researcher to easily identify if students are making growth and are within their expected abilities. Gold is assessed three times per year, Fall, Winter and Spring. Gold is shared with parents at conferences; additionally, it

may be shared with administrators as students prepare for kindergarten. It is crucial in driving instruction within the classroom, although it must be noted that instruction should not be planned around the need for collection in specific data points.

The researcher examined the scores of participants from Gold's Fall assessment, which occurred prior to the instruction of any interventions. The researcher then compared Fall scores to both Winter and Spring scores. It should be noted that Spring Gold's scores will not be finalized prior to the completion of the action research. The entire data collection process took place over four weeks, with the baseline data being the measure of social-emotional scores versus expected behaviors in accordance with Winter and Spring 2019 data. The data collected during baseline allowed the researcher to determine the gap between expected social-emotional milestones and cues versus the actual student performance. Interventions focused on teaching positive replacement behaviors to use in a multitude of social settings throughout the course of a student's day. Reinforcers included a Super Star, positive praise from both teachers and peers, and public acknowledgement.

After analyzing student scores, the researcher will continue the implementation of peer-mediated strategies over the course of four weeks, recording data on participants daily. The dependent variables that data will be collected are on successful completion of the targeted intervention, whether the completion was assisted or independent, and the response of the student to the reinforcer. All data collection will be done by the researcher, who has been trained in the use of Teaching Strategies Gold. Data collection will occur in the classroom environment, over the duration of a typical school day. Data collection will be unobtrusive and follow the classroom routines. Data collection occurs during free-choice center play, which is the time that reinforcers for the social skill are provided.

Peer-mediated strategies that will be introduced, taught and reinforced accompany the LEAP method. LEAP expectations indicate that teachers who are utilizing their strategies with fidelity will meet several criteria; teachers will only teach the five strategies in their intended order (getting a peer's attention, sharing an item with a peer, requesting an item or turn from a peer, giving a play idea to a peer, and complimenting a peer). Additionally, teachers will not move on to the next social skill until 80 percent of the class is independently demonstrating the skill consistently. Peer mediated-strategies are infused throughout the duration of the student's day, from the moment of arrival to the end of the day, planned and implemented systematically by teachers and assessed in an on-going manner.

Teaching Strategies Gold conducted research extensively over the course of the 2012-2013 school year, ensuring to teachers and other educational stakeholders that Gold is both valid and reliable in their measurements (Teaching Strategies Gold, 2019). Because Gold is an observation-based assessment system that relies on teachers to be impartial and subjective, its validation has been called into question. However, the Center for Educational Measurement and Evaluation (CEME) indicated that, "The Teaching Strategies Gold assessment system continues to yield highly reliable and valid results" (Heroman, 2016, p. 7). The aforementioned data collection with relation to the performance of peer-mediated interventions was entered into the data collection piece of Gold, with students being rated with their corresponding color bands for objectives 1a, 1b, 2c, 3a and 3b. Through the research proposed, data collection will end in four weeks due to time requirements for the researcher's capstone project, the researcher will plan to extend the study and data collection through the finalization of Spring 2019 Gold data points.

Findings

Data Analysis

There was minimal researcher bias in this action research project. The researcher is a certified teacher with ten years of experience, four of which have been in a preschool classroom. The data was collected by the researcher and classroom paraprofessional, as well as the special education teacher who co-teaches. All participants involved in the collection of data received specific instructions, both verbal and written, to ensure validity across multiple sources. Data was collected using a coding system to prevent quantitative unbiased data. Collecting quantitative data allowed the researcher to understand the benefits of peer-mediated strategies.

Qualitative data was collected both prior to the implementation of peer-mediated strategies and post-implementation. The researcher conducted parent-teacher interviews at conferences in both Fall 2018 (prior to implementation) and Spring 2019 (post-implementation). Prior to, parents expressed general concerns with a lack of self-regulation within their students, indicating that meltdowns, tantrums and physical aggression were common when students were not given requested tangibles or were not granted requests. Age-appropriate expectations were compared using Teaching Strategies Gold and were analyzed with parents to compare present levels with expected levels; many students fell below or significantly below the widely-held expectations. The researcher and classroom support staff noticed behaviors that mirrored those being described by parents being exhibited at school, with many students using hitting, pinching, yelling or grabbing to seek items from peers. Follow-up conversations occurred after direct peer mediated-strategies instruction had occurred, with parents indicating that many behaviors had decreased at home, although they had not completely subsided.

The quantitative data was collected using a table to track the amount of times each student demonstrated the peer-mediated strategy, whether the strategy was prompted or independent, and the reaction of the student to the extrinsic motivation. The data collected was entered into a table to track the frequency of the skill and determine if independence of the skill demonstrated improved over time (Table 1). Data was collected data and compiled into total number of times the student demonstrated the skill over the four-week collection period (with no preschool on Fridays, the total number of data collecting days added up to 16), how many times were prompted versus independent, and the reaction of the student (positive, neutral, negative).

Table 1

Student performance of targeted peer intervention skill

Student	Skill utilized (out of 16)	Self-initiated vs. prompted	Reaction to motivation
A	11	7 self-initiated, 4 prompted	10 positive, 2 neutral
B	9	9 self-initiated	5 positive, 4 neutral
C	12	6 self-initiated, 6 prompted	10 positive, 2 neutral
D	16	12 self-initiated, 4 prompted	16 positives
E	8	6 self-initiated, 2 prompted	4 positive, 4 neutral
F	12	2 self-initiated, 10 prompted	8 positive, 4 neutral
G	10	6 self-initiated, 4 prompted	10 positive

Table 1 indicates the number of times each student in the research demonstrated the peer-mediated strategy in column two, with self-initiated versus prompted in column three. Student response is recorded in column four. Peer-mediated strategies initiated by the students stood at 62%, while 38% were prompted by adults in proximity. The reactions to extrinsic motivation proved to elicit positive reactions 81% of the time, with 19% eliciting neutral reactions. No reactions were negative to earning the SuperStar as extrinsic motivation. There was no correlation identified to determine if earning SuperStars caused an increase in internal motivation.

Table 2 shows the percentage of students in relation to age-expected benchmarks in accordance with Teaching Strategies Gold, solely examining scores from the social-emotional objectives. Data was collected from August to October 2018. Column one identifies the number and percentage of students below expectation, column two identifies the number of students meeting expectations and column three shows students exceeding expectations. Table 2 data is taken from Teaching Strategies Gold Fall 2018 data, examining 36 total students. Students involved in the data collection process were from both morning and afternoon sections of the researcher's class, totaling 18 students per class.

Table 2

<i>Social emotional data, Fall 2018, researcher's classroom</i>		
Below	Meeting	Exceeding
64%	36%	0%
23/36 students	13/36 students	0/36 students

The data in table 2 indicates that the majority of students in both preschool sections were below age-appropriate expectations in the Fall 2018. The researcher considered several factors in the analysis of this data; the number of students who had never attended a formal education setting and the collective age of students in the class. Data indicates that students needed direct instruction in social skills and peer-mediated strategies to improve self-regulation, the ability to enter social settings and appropriately getting the attention of peers or wanted objects and tangibles. With expectations falling significantly below benchmark, teachers met in collaborative professional learning communities to develop strategies and content to aid with the implementation of peer-mediated strategies. Additionally, it should be noted that the researcher began to receive coaching from district and professionals from within LEAP, based out Denver, Colorado.

Table 3 demonstrates the same data, from the global perspective of the district collectively. In examining the data from the researcher's classroom versus the data from the district as a whole, students in the researcher's classroom are significantly behind in comparison with peers. It should be noted that a total of 6 other early learning classrooms in the district (out of a total 25 classrooms) are LEAP classrooms who are in second year or beyond of the implementation of peer-mediated strategies. The socio-economic status of the researcher's school falls at 77% free and reduced lunch, which is comparable to many of the schools within the district itself. Table 3 indicates that a majority of students within the district were meeting benchmark.

Table 3

Social emotional data, Fall 2018, school district level

Below	Meeting	Exceeding
38.74%	59.26%	2%
387 students	592 students	20 students

Table 4 examines the data using scores from Winter 2019 scores. Between data collection points in Fall 2018 and Winter 2019, the number of students meeting expectations in social-emotional benchmarks grew a total of 39%, while the number of students who were below expectations decreased by 39%. This indicates that the implementation of peer-mediated strategies contributed positively to the social-emotional development of students within the classroom. While a percentage of students continued to remain below benchmark, the researcher continued to meet weekly in collaborative planning with coaches and teammates, and received additional monthly planning time with other LEAP classrooms in the district to discuss strategies and plan content. Peer-mediated strategies will continue to be introduced and reinforced over the duration of the remainder of the school year and data will be examined again in May, after the final Gold checkpoint.

Table 4

Social emotional data, Winter 2019, researcher's classroom

Below	Meeting	Exceeding
25%	75%	0%
9/36 students	27/36 students	0/36 students

Table 5 examines the data from Winter 2019 at the district level. The percentages of students who are meeting expectations is comparable to students in the researcher's classroom, but the percentage of growth from students below to students meeting only grew by 16%, as opposed to the researcher's classroom growing 39% over the same period of time. The data indicates that the strategies within the researcher's classroom are being implemented with fidelity and monitored consistently. Many students continue to remain below benchmark, but ongoing evaluation continues, as well as co-planning. It should be noted that bringing all students above benchmark in its first year of implementation, while achievable, is unlikely.

Table 5

<i>Social emotional data, Winter 2019, school district level</i>		
Below	Meeting	Exceeding
16.57%	75.2%	8.24%
169 students	767 students	84 students

Discussion

Summary of Major Findings

In examining the major findings, the data indicates that the use of peer-mediated strategies within the classroom has a positive correlation to an increase in social emotional skills. The success of the implementation relied on multiple opportunities for exposure, positive reinforcement and assurance of fidelity of one skill prior to the introduction of another. Additionally, immediate reinforcement was required to provide a positive correlation between the usage of the strategy and internal motivation. Through the use of intrinsic and extrinsic motivation, students showed a progression towards age appropriate expectations in entering

social settings, solving social problems, self-regulation and sustained interactions with peers. Research participants, as well as the class in their entirety, showed a tremendous amount of growth in the number of proficient students, as identified by the objectives in Gold.

Limitations of the Study

One limitation of this research study is the participants; students were chosen by looking at gaps in social-emotional development. This makes it difficult to ascertain the effect on students who are already meeting social-emotional standards according to Gold and the effects this may have on typically developing students. Furthermore, coaching was an additional limitation; the researcher was receiving direct coaching in the implementation of peer-mediated strategy by professionals from an academic institution while the research was occurring within the classroom. An additional limitation was the number of teachers involved in the research; there are two classrooms in the researcher's building who utilize peer-mediated strategies, but research was only conducted in one classroom. Other teachers across the building do not currently use this model within their classroom, although some may choose to use peer modeling or peer-mediation for academic purposes. Lastly, there are discrepancies between the school's foundational principals of Leader in Me and the principals of peer-mediated strategies, causing a shift from an academic focus to a social-emotional focus within the classroom.

Further Study

Future studies of the effects of peer-mediated strategies on the effects of social emotional development may want to study how social-emotional growth develops over a longer duration of time, including a full school year. In order to fully implement the curriculum, further studies may want to provide training to teachers prior to beginning peer-mediated strategies within the classroom, allowing a foundational understanding of the importance of utilizing peers as models

within the classroom, allowing the paradigm shift from a teacher-centered classroom to a student-centered classroom. The large paradigm shifts in the approaches to intervening the social and the understanding that the strategies must have 80% of students demonstrating the skill independently before progressing to the next skill may require coaching from external sources, including administration. Future studies may want to explore the retention of peer-mediated strategies as students' progress from preschool into higher grade levels.

Conclusion

Through the use of researcher observations and data collection logs which tracked frequency of extrinsic rewards, the action research indicates that peer-mediated strategies have a positive correlation to increasing social emotional skills for students demonstrating a delay in age appropriate expectations. It is currently unclear if the increase in social skills will continue over time if rewards were not offered or phased out. The study leads the researcher to believe that peer-mediated strategies need to be implemented without intrinsic rewards to form a better understanding of how social emotional growth occurs solely through the strategies themselves. Tracking the growth over a longer duration of time and across more students will allow a deeper understanding of the true effects that utilizing peers has on solving social problems, self-regulation, entering social settings and positive interactions and engagement with peers. Additionally, it would allow for an understanding of the transference of these skills across multiple school years. Implementing peer-mediated strategies throughout additional grade levels will allow colleagues to have an understanding of the correlation between empowering peers and positive effects across other areas, including both social emotional and academic successes. The outcome of this research project indicates that the usage of peer-mediated strategies may affect

the social emotional growth of preschool students positively, but further research is necessary to determine long-term effects on more students and without the use of a reward.

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